

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Transmittal of Interim Final Management Principles for Implementing Response Actions at Closed, Transferring, and Transferred Ranges

1. Reference DAIM-ED memorandum, 8 August 2000, subject: Transmittal of Interim Final Management Principles for Implementing Response Actions at Closed, Transferring, and Transferred Ranges - Action Memorandum.
2. This forwards the "Interim Final Management Principles" with our instructions for application at Ordnance and Explosives (OE) sites for which USACE has primary responsibility (Formerly Used Defense Sites (FUDS)). During execution of work for others, if customers desire a deviation from these principles, including the USACE interpretations, please notify CEMP-R. This will help us keep from creating a precedence that may make FUDS different from what is happening on a BRAC or closed range or it will give us an opportunity to do so with open eyes.
3. Our point of contact on this matter is Mr. Larry Barb, CEMP-RA, at (202) 761-4706. He can be reached via email at [larry.b.barb@usace.army.mil](mailto:larry.b.barb@usace.army.mil).

FOR THE COMMANDER:

Encl

/S/  
PATRICIA A. RIVERS, P.E.  
Chief, Environmental Division  
Office of the Deputy Commanding General  
for Military Programs

CEMP-RA (200-1a)

/s/ 19 December 2000

SUBJECT: Transmittal of Interim Final Management Principles for Implementing Response Actions at Closed, Transferring, and Transferred Ranges

DISTRIBUTION:

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U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

U.S. ARMY ENGINEER TRANSATLANTIC PROGRAMS CENTER

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## UXO MANAGEMENT PRINCIPLES IMPLEMENTATION GUIDANCE

This guidance has been developed for use by US Army Corps of Engineers (USACE) Project Managers (PMs) and Project Engineers (PEs) for application at Ordnance and Explosives (OE) sites for which USACE has primary responsibility. The text of the *Interim Final DoD and EPA Management Principles for Implementing Response Actions at Closed, Transferring, and Transferred (CTT) Ranges* (“UXO Management Principles” or “Principles”) is reprinted throughout this document in shaded boxes. The text has been altered for purposes of this guidance only to allow the assignment of an identifying number to each statement. The identifying number has been noted in parenthesis following each statement. USACE implementing guidance follows the specific UXO Management Principle being addressed.

The Department of Army Memorandum transmitting the UXO Management Principles to Army organizations is reprinted in the box directly following this paragraph. The Memorandum directs Army field organizations to “consider” the Principles when planning and implementing OE response actions at CTT ranges. OE response actions, in addition to being conducted consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Department of Defense (DOD) and Army policy, must be conducted in accordance with the Defense Environmental Restoration Program (DERP), the law with which Congress directed the Secretary of Defense to implement a program of environmental restoration, addressing, among other things, OE. As the authorizing law under which OE response actions are implemented, DERP is the definitive set of requirements that must be met by all OE response actions. Nothing in the UXO Management Principles will allow any installation or Major Command to violate DERP in any way.

DAIM-ED (200-1)

MEMORANDUM THRU DIRECTOR OF THE ARMY STAFF ADMINISTRATIVE  
ASSISTANT TO THE SECRETARY OF THE ARMY

FOR SEE DISTRIBUTION

SUBJECT: Transmittal of *Interim Final Management Principles for Implementing Response Actions at Closed, Transferring, and Transferred Ranges* – Action Memorandum

Purpose: To distribute within the Army the *Interim Final Management Principles for Implementing Response Actions at Closed, Transferring, and Transferred Ranges* (“management principles”) (TAB A).

Discussion:

a. Beginning in June 1999, the Deputy Under Secretary of Defense (Environmental Security) (DUSD(ES)), Service representatives, and their U.S. Environmental Protection Agency (EPA) counterparts started development of “management principles” to help their respective field organizations that are involved in conducting response actions at closed, transferring, and transferred ranges.

b. On March 7, 2000, Ms. Sherri Goodman, DUSD(ES), and Mr. Timothy Fields, EPA Assistant Administrator for Solid Waste and Emergency Response, signed the “management principles.”

Recommendations:

- a. Major Commands (MACOMs) should distribute the attached “management principles” and associated “Frequently Asked Questions” (TAB B) to their field organizations with direction to consider these “management principles” in the planning and execution of response actions at closed, transferring, or transferred ranges.
- b. The “management principles” are only intended to be an interim measure during the period prior to promulgation of the Range Rule. The Army, as the Department of Defense (DOD) lead agent for development of the Range Rule, continues to press hard for interagency agreement on the Range Rule, so as to allow its promulgation this calendar year. The nature and timing of additional detailed guidance on these “management principles” depends, in part, on the on-going Range Rule discussions.
- c. Should issues regarding the “management principles” arise, to the extent that a request by EPA is safe, reasonable, and fully consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), these “management principles,” and DOD and Army policy, installations should attempt to accommodate the request. If a request is deemed unsafe (e.g., from an explosives safety, occupational health, or worker safety standpoint), unreasonable, or inconsistent with CERCLA, these “management principles,” or DOD or Army policy, the installation should not attempt to accommodate the request without first resolving those concerns.
- d. In these “management principles,” DOD and EPA agreed to first attempt to reach resolution of issues at the lowest organization level. This agreement, however, does not allow an installation or MACOM to agree to conduct actions that are unsafe, unreasonable, or inconsistent with CERCLA, these “management principles,” or DOD or Army policy. When necessary or appropriate, unresolved issues or disputes should be raised through the chain of command to the Assistant Chief of Staff for Installation Management (ACSIM) or through other established mechanisms (e.g., a formal dispute resolution process) for resolution.

Questions regarding the “management principles” may be directed to our point of contact, Mr. David Green, DAIM-ED-M by telephone at 703.693.0671 (DSN 223.0671) or via email at: [david.green@hqda.army.mil](mailto:david.green@hqda.army.mil).

R.L. VAN ANTWERP  
Major General, GS  
Assistant Chief of Staff  
for Installation Management

Raymond J. Fatz  
Deputy Assistant Secretary of the Army  
(Environment, Safety, and Occupational Health)  
OASA (I&E)

Enclosures

**DoD and EPA Management Principles  
for Implementing Response Actions  
at Closed, Transferring, and Transferred (CTT) Ranges**

**Preamble**

Many closed, transferring, and transferred (CTT) military ranges are now or soon will be in the public domain. DoD and EPA agree that human health, environmental and explosive safety concerns at these ranges need to be evaluated and addressed. On occasion, DoD, EPA and other stakeholders, however, have had differing views concerning what process should be followed in order to effectively address human health, environmental, and explosive safety concerns at CTT ranges. Active and inactive ranges are beyond the scope of these principles.

To address concerns regarding response actions at CTT ranges, DoD and EPA engaged in discussions between July 1999 and March 2000 to address specific policy and technical issues related to characterization and response actions at CTT ranges. The discussions resulted in the

development of this Management Principles document, which sets forth areas of agreement between DoD and EPA on conducting response actions at CTT ranges.

These principles are intended to assist DoD personnel, regulators, tribes, and other stakeholders to achieve a common approach to investigate and respond appropriately at CTT ranges.

In accordance with the Preamble of the UXO Management Principles, this guidance is applicable only to closed, transferring, and transferred (CTT) military ranges. Actions taken at CTT ranges pursuant to the UXO Management Principles and this guidance will in no way be construed to be a precedent to be applied to active ranges.

#### **General Principles**

**DoD is committed to promulgating the Range Rule as a framework for response actions at CTT military ranges. EPA is committed to assist in the development of this Rule. To address specific concerns with respect to response actions at CTT ranges prior to implementation of the Range Rule, DoD and EPA agree to the following management principles:**

- DoD will conduct response actions on CTT ranges when necessary to address explosives safety, human health and the environment. DoD and the regulators must consider explosives safety in determining the appropriate response actions (Principle G-1.)
- DoD is committed to communicating information regarding explosives safety to the public and regulators to the maximum extent practicable (Principle G-2.)
- DoD and EPA agree to attempt to resolve issues at the lowest level. When necessary, issues may be raised to the appropriate Headquarters level. This agreement should not impede an emergency response (Principle G-3.)
- The legal authorities that support site-specific response actions at CTT ranges include, but are not limited to, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as delegated by Executive Order (E.O.) 12580 and the National Oil and Hazardous Substances Contingency Plan (NCP); the Defense Environmental Restoration Program (DERP); and the DoD Explosives Safety Board (DDESB) (Principle G-4.)
- A process consistent with CERCLA and these management principles will be the preferred response mechanism used to address UXO at a CTT range. EPA and DoD further expect that where this process is followed, it would also meet any applicable RCRA corrective action requirements (Principle G-5.)
- These principles do not affect federal, state, and tribal regulatory or enforcement powers or authority concerning hazardous waste, hazardous substances, pollutants or contaminants, including imminent and substantial endangerment authorities; nor do they expand or constrict the waiver of sovereign immunity by the United States contained in any environmental law (Principle G-6.)

**Principle G-2:** In accordance with EP 1110-3-8, *Public Participation in the Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS)*, USACE PMs are advised to develop, early in the planning phase of each project, and to maintain

throughout the response action, a relationship with stakeholders that includes open communication on the part of all parties.

**Principle G-5:** This statement does not imply applicability of Resource Conservation and Recovery Act (RCRA) to FUDS response actions nor does it imply any additional applicability of RCRA at Base Realignment and Closure (BRAC) or active installations, beyond its applicability as an applicable, relevant, and (ARAR.)

#### **1. State and Tribal Participation**

**DoD and EPA are fully committed to the substantive involvement of States and Indian Tribes throughout the response process at CTT ranges. In many cases, a State or Indian Tribe will be the lead regulator at a CTT range. In working with the State or Indian Tribe, DoD will provide them opportunities to:**

- Participate in the response process, to the extent practicable, with the DoD Component (Principle 1-1.)
- Participate in the development of project documents associated with the response process (Principle 1-2.)
- Review and comment on draft project documents generated as part of investigations and response actions (Principle 1-3.)
- Review records and reports (Principle 1-4.)

**Principles 1-1, 1-2, 1-3, and 1-4:** EP 1110-3-8, *Public Participation in the Defense Environmental Restoration Program* provides guidance and procedures for meaningful stakeholder, including American Indian Tribe and federal and state regulator, involvement in the OE response process. EP 1110-3-8 requires community relations programs be carried out to ensure full participation of all interested stakeholders in Restoration Advisory Boards (RABs) and in the development of project documents by requiring the opportunity for stakeholders to review and comment on draft documents. In addition, DoD has published the *American Indian and Alaska Native Policy*, October 20, 1998, setting forth principles addressing trust responsibilities, government-to-government relations, and consultation.

USACE PMs for OE projects are advised to implement Technical Project Planning (TPP), which brings together representatives of interested stakeholders and the DoD early in the project-planning phase. In accordance with EM 200-1-2, *Technical Project Planning (TPP) Process*, TPP promotes early and sustained stakeholder participation in all phases of response actions.

#### **2. Response Activities under CERCLA**

**DoD Components may conduct CERCLA response actions to address explosives safety hazards, to include UXO, on CTT military ranges per the NCP. Response activities may include removal actions, remedial actions, or a combination of the two.**

- DoD may conduct response actions to address human health, environmental, and explosives safety concerns on CTT ranges. Under certain circumstances, other federal and state agencies may also conduct response actions on CTT ranges (Principle 2-1.)

- Removal action alternatives will be evaluated under the criteria set forth in the National Contingency Plan (NCP), particularly NCP §300.410 and §300.415 (Principle 2-2.)
- DoD Components will notify regulators and other stakeholders, as soon as possible and to the extent practicable, prior to beginning a removal action (Principle 2-3.)
- Regulators and other stakeholders will be provided an opportunity for timely consultation, review, and comment on all phases of a removal response, except in the case of an emergency response taken because of an imminent and substantial endangerment to human health and the environment and consultation would be impracticable (see 10 USC 2705) (Principle 2-4.)
- Explosives Safety Submissions (ESS), prepared, submitted, and approved per DDESB requirements, are required for Time Critical Removal Actions, Non-Time Critical Removal Actions, and Remedial Actions involving explosives safety hazards, particularly UXO (Principle 2-5.)
- The DoD Component will make available to the regulators, National Response Team, or Regional Response Team, upon request, a complete report, consistent with NCP §300.165, on the removal operation and the actions taken (Principle 2-6.)
- Removal actions shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action. If the DoD Component determines, in consultation with the regulators and based on these Management Principles and human health, environmental, and explosives safety concerns, that the removal action will not fully address the threat posed and remedial action may be required, the DoD Component will ensure an orderly transition from removal to remedial response activities (Principle 2-7.)

**Principle 2-1:** All requests by other federal and state agencies to conduct OE response actions at FUDS should be coordinated, by the requesting agency, with US Army Engineering and Support Center, Huntsville (USAESCH) OE Safety and HQ USACE, Office of Counsel. All requests from such agencies for funding at FUDS should be forwarded through the chain of command to HQ USACE, FUDS office.

**Principle 2-2:** In addition to NCP Sections 300.410 and 300.415, USACE Project Teams (the OE Project Team is defined in EP 1110-1-18, *Ordnance and Explosives Response*) are advised to consider the criteria set forth in NCP Section 300.430, *Remedial Investigation Feasibility Study and Selection of Remedy*, specifically the nine criteria listed in Section 300.430(e)(9), when evaluating response alternatives.

**Principle 2-3:** USACE PMs are advised to establish points of contacts within stakeholder groups early in the project planning process to facilitate effective two-way communication, in accordance with EM 200-1-2, *Technical Project Planning (TPP) Process* and EP 1110-3-8, *Public Participation in the Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS)*.

**Principle 2-4:** “Timely consultation, review, and comment” on the part of regulators and other stakeholders will generally mean a 30-day period.

USACE PMs are advised, through use of the TPP process and with the input of the TPP Team (TPP Team is defined in EM 200-1-2, *Technical Project Planning (TPP) Process*), to develop a project-specific list of documents (i.e., INPR, ASR, EE/CA Report etc.) that will be provided to the stakeholders for review, as the documents are developed. The Project Team must comply with Table 2-2 of EP 1110-3-8, *Public Participation in the Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS)*, which identifies specific documents that must be made available to stakeholders for review. Project Teams may identify additional documents to be reviewed, on a site-by-site basis.

**Principle 2-5:** At FUDS, ESSs are required only for final response actions such as Non-Time Critical Removal Actions (NTCRAs). Requirements for Expedited ESSs for Time Critical Removal Actions (TCRAs) are currently being developed by HQDA.

At FUDS, ESSs are not required for investigative activities such as Engineering Evaluation/Cost Analyses (EE/CAs) and Remedial Investigation/Feasibility Studies (RI/FSs).

**Principle 2-6:** Upon request, USACE will make available to the National Response Team or the Regional Response Team the final Site-Specific Removal Report. The Site-Specific Removal Report must also be placed in the site Information Repository.

**Principle 2-7:** USACE PMs are advised to implement the TPP process, including development of a comprehensive Conceptual Site Model addressing both OE and Hazardous, Toxic, and Radioactive Waste (HTRW) concerns. Agreement among the Project Team members of potential OE and HTRW concerns and the steps necessary to achieve site closeout will facilitate orderly transfer of the project from removal to remedial, if necessary and the transition from OE response activities to HTRW response activities, if necessary.

### **3. Characterization and Response Selection**

**Adequate site characterization at each CTT military range is necessary to understand the conditions, make informed risk management decisions, and conduct effective response actions.**

- Discussions with local land use planning authorities, local officials and the public, as appropriate, should be conducted as early as possible in the response process to determine the reasonably anticipated future land use(s). These discussions should be used to scope efforts to characterize the site, conduct risk assessments, and select the appropriate response(s) (Principle 3-1.)
- Characterization plans seek to gather sufficient site-specific information to: identify the location, extent, and type of any explosives safety hazards (particularly UXO), hazardous substances, pollutants or contaminants, and "Other Constituents"; identify the reasonably anticipated future land uses; and develop and evaluate effective response alternatives (Principle 3-2.)
- Site characterization may be accomplished through a variety of methods, used individually or in concert with one another, including, but not limited to: records searches, site visits, or actual data acquisition, such as sampling. Statistical or other mathematical analyses (e.g., models) should recognize the assumptions imbedded within those analyses. Those assumptions, along with the intended use(s) of the analyses, should be communicated at the



front end to the regulator(s) and the communities so the results may be better understood. Statistical or other mathematical analyses should be updated to include actual site data as it becomes available (Principle 3-3.)

- Site-specific data quality objectives (DQOs) and QA/QC approaches, developed through a process of close and meaningful cooperation among the various governmental departments and agencies involved at a given CTT military range, are necessary to define the nature, quality, and quantity of information required to characterize each CTT military range and to select appropriate response actions (Principle 3-4.)
- A permanent record of the data gathered to characterize a site and a clear audit trail of pertinent data analysis and resulting decisions and actions are required. To the maximum extent practicable, the permanent record shall include sensor data that is digitally-recorded and geo-referenced. Exceptions to the collection of sensor data that is digitally-recorded and geo-referenced should be limited primarily to emergency response actions or cases where impracticable. The permanent record shall be included in the Administrative Record. Appropriate notification regarding the availability of this information shall be made (Principle 3-5.)
- The most appropriate and effective detection technologies should be selected for each site. The performance of a technology should be assessed using the metrics and criteria for evaluating UXO detection technology described in Section 4 (Principle 3-6.)
- The criteria and process of selection of the most appropriate and effective technologies to characterize each CTT military range should be discussed with appropriate EPA, other Federal State, or Tribal agencies, local officials, and the public prior to the selection of a technology (Principle 3-7.)
- In some cases, explosives safety, cost, and/or technical limitations, may limit the ability to conduct a response and thereby limit the reasonably anticipated future land uses. Where these factors come into play, they should be discussed with appropriate EPA, other federal, State or Tribal agencies, local officials, and members of the public and an adequate opportunity for timely review and comment should be provided. Where these factors affect a proposed response action, they should be adequately addressed in any response decision document. In these cases, the scope of characterization should be appropriate for the site conditions. Characterization planning should ensure that the cost of characterization does not become prohibitive or disproportionate to the potential benefits of more extensive characterization or further reductions in the uncertainty of the characterization (Principle 3-8.)
- DoD will incorporate any Technical Impracticability (TI) determination and waiver decisions in appropriate decision documents and review those decisions periodically in coordination with regulators (Principle 3-9.)
- Selection of site-specific response actions should consider risk plus other factors and meet appropriate internal and external requirements (Principle 3-10.)

**Principle 3-1:** USACE PMs are advised to consider the concerns and plans of the local land use planning authorities early in the TPP process to aid in focusing project activities, in part, on those areas of greatest interest to future land users. In accordance with EP 1110-1-18, *Ordnance and Explosives Response*, Project Teams are to complete an institutional analysis as part of the EE/CA to identify local agencies and the limits of their authorities and local permitting procedures. Results of institutional analyses are used by the Project Team in developing and evaluating response alternatives that include institutional controls.

**Principle 3-2:** In the event site-specific information indicates the potential presence of both OE and HTRW, two separate characterization plans will be developed and two separate response actions subsequently completed, one addressing the presence of OE and one addressing HTRW contamination. The timing of the individual response actions will be determined site-specifically based on the nature and extent of contamination and the potential exposures, as defined by the Risk Assessment Code (RAC) score and the Project Team at the beginning of the project using the TPP process. Separate characterization plans and response actions are necessitated by the fact that OE and HTRW response actions address very different concerns (explosive safety vs. chemical exposure) and require substantially different expertise to design and implement.

If the potential presence of “other constituents” due to the existence of OE is a concern, USACE PMs may determine that the collection of discrete environmental (soil, surface water, and/or ground water) samples may be warranted. In this case, the rationale for collecting such discrete samples, a decision matrix limiting the number of samples collected, field collection procedures, QA/QC requirements, transportation procedures, and laboratory detection limits must all be specified in the characterization work plan.

The term “sufficient” as applied to OE characterization is defined, for purposes of this statement, to mean historical data, aerial photos, interviews, and surveying data adequate to develop and evaluate response alternatives and to design the removal action.

**Principle 3-4:** Through the TPP process, USACE PMs are advised to involve stakeholders in developing site-specific Data Quality Objectives (DQOs), however the ultimate responsibility for determining DQOs and the most effective and appropriate field surveying methods resides with the USACE PM.

**Principle 3-5:** Ultimate responsibility for determining, site-specifically, the best available surveying method(s) resides with the Project Team.

Only that data that is collected prior to formalizing the response decision in an Action Memorandum or Record of Decision will be included in the Administrative Record, in accordance with EP 1110-3-8, *Public Participation in the Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS)*. Data collected as part of the Removal Action or Remedial Action will be included in the publicly available Information Repository.

**Principle 3-7:** Through the TPP process, stakeholders should be informed of, and given the opportunity to provide input to, the decision-making process whereby characterization technology (ies) are chosen, including the site-specific geophysical prove out. However, the ultimate responsibility for determining the most effective and appropriate field surveying methods and percentage of acreage surveyed remain with the USACE PM and PE, as the designated OE experts.

**Principle 3-8:** Regulators have, at times, demanded 100% “sampling” to support a site-specific response decision. In accordance with EP 1110-1-18, *Ordnance and Explosives Response*, 100%

of a project site is investigated for the presence of OE through the use of historical records, interviews, aerial photographic interpretation, and site walkovers to identify potential areas of concern. Areas of concern are those areas in which OE has been positively identified or in which the potential for OE exists. Only those areas on-site that have been identified as potential areas of concern are then geophysical surveyed. USACE PMs may consider limited surveying outside identified areas of concern to address specific stakeholder concerns.

**Principle 3-9:** In general, impracticability limitations are identified during the alternatives analysis as discussed in the National Contingency Plan Section 300.430(e)(7) which states “(a)lternatives that are technically or administratively infeasible or that would require equipment, specialists, or facilities that are not available within a reasonable period of time may be eliminated from further consideration.”

For purposes of these Principles, the term “Technical Impracticability” is defined as a response alternative’s limited ability to mitigate potential OE hazards due to lack of access necessary to implement the alternative, un-negotiable terrain/vegetation, inability to geophysically detect, environmental constraints, and safety constraints.

Periodic reviews of Technical Impracticability determinations are conducted as part of the site-specific Recurring Review, which occur no less often than every five years after the completion of field activities (ie. Removal Action.)

#### **4. UXO Technology**

**Advances in technology can provide a significant improvement to characterization at CTT ranges. This information will be shared with EPA and other stakeholders.**

- The critical metrics for the evaluation of the performance of a detection technology are the probabilities of detection and false alarms. A UXO detection technology is most completely defined by a plot of the probability of detection versus the probability or rate of false alarms. The performance will depend on the technology’s capabilities in relation to factors such as type and size of munitions, the munitions depth distribution, the extent of clutter, and other environmental factors (e.g., soil, terrain, temperature, geology, diurnal cycle, moisture, vegetation). The performance of a technology cannot be properly defined by its probability of detection without identifying the corresponding probability of false alarms. Identifying solely one of these measures yields an ill-defined capability. Of the two, probability of detection is a paramount consideration in selecting a UXO detection technology (Principle 4-1.)
- Explosives safety is a paramount consideration in the decision to deploy a technology at a specific site (Principle 4-2.)
- General trends and reasonable estimates can often be made based on demonstrated performance at other sites. As more tests and demonstrations are completed, transfer of performance information to new sites will become more reliable (Principle 4-3.)
- Full project cost must be considered when evaluating a detection technology. Project cost includes, but is not limited to, the cost of deploying the technology, the cost of excavation resulting from the false alarm rate, and the costs associated with recurring reviews and inadequate detection (Principle 4-4.)

- Rapid employment of the better performing, demonstrated technologies needs to occur (Principle 4-5.)
- Research, development, and demonstration investments are required to improve detection, discrimination, recovery, identification, and destruction technologies (Principle 4-6.)

**Principle 4-1:** In addition to the critical metrics mentioned in this statement, USACE PMs are required to consider cost, implementability, and the DQO of the effort in question when evaluating detection technology performance.

## 5. Land Use Controls

**Land use controls must be clearly defined, established in coordination with affected parties (e.g., in the case of FUDS, the current owner; in the case of BRAC property, the prospective transferee), and enforceable.**

- Because of technical impracticability, inordinately high costs, and other reasons, complete clearance of CTT military ranges may not be possible to the degree that allows certain uses, especially unrestricted use. In almost all cases, land use controls will be necessary to ensure protection of human health and public safety (Principle 5-1.)
- DoD shall provide timely notice to the appropriate regulatory agencies and prospective federal land managers of the intent to use Land Use Controls. Regulatory comments received during the development of draft documents will be incorporated into the final land use controls, as appropriate. For Base Realignment and Closure properties, any unresolved regulatory comments will be included as attachments to the Finding of Suitability to Transfer (FOST) (Principle 5-2.)
- Roles and responsibilities for monitoring, reporting and enforcing the restrictions must be clear to all affected parties. The land use controls must be enforceable (Principle 5-3.)
- Land use controls (e.g., institutional controls, site access, and engineering controls) may be identified and implemented early in the response process to provide protectiveness until a final remedy has been selected for a CTT range (Principle 5-4.)

Land use controls must be clearly defined and set forth in a decision document (Principle 5-5.)

Final land use controls for a given CTT range will be considered as part of the development and evaluation of response alternatives using the nine criteria established under CERCLA regulations (i.e., NCP), supported by a site characterization adequate to evaluate the feasibility of reasonably anticipated future land uses. This will ensure that land use controls are chosen based on a detailed analysis of response alternatives and are not presumptively selected (Principle 5-6.)

DoD will conduct periodic reviews consistent with the Decision Document to ensure long-term effectiveness of the response, including any land use controls, and allow for evaluation of new technology for addressing technical impracticability determinations (Principle 5-7.)

When complete UXO clearance is not possible at military CTT ranges, DoD will notify the current landowners and appropriate local authority of the potential presence of an explosives safety hazard. DoD will work with the appropriate authority to implement additional land use controls where necessary (Principle 5-8.)

Note: USACE PMs and PEs should ensure that all Project Team members and Stakeholders are using the same definition of the terms “land use controls,” “institutional controls,” “engineering controls,” and “site access controls.”

**Principle 5-1:** USACE PMs are advised to plan for and implement land use controls in accordance with DUSD(ES/CL) Memorandum Subject: *Interim Policy on Land Use controls Associated with Environmental Restoration Activities*, 31 August 2000, and EP 1110-1-24, *Establishing and Maintaining Institutional Controls for Ordnance and Explosives Projects*, 13 November 2000. When considering potential land use controls as part of response alternatives, Project Team members and stakeholders must be aware that land use controls (property restrictions) cannot be forced upon property owners at transferred sites.

**Principle 5-2:** USACE PMs are advised, through implementation of the TPP process, to ensure that stakeholders are aware, early in the EE/CA stage, of potential land use controls that may be considered during the alternatives evaluation.

**Principle 5-3:** In accordance with EP 1110-1-18, *Ordnance and Explosives Response*, and EP 1110-1-24, *Establishing and Maintaining Institutional Controls for OE Projects*, an Institutional Analysis must be completed as part of the EE/CA. The Institutional Analysis includes an evaluation of local, state, federal and/or private agencies’ jurisdiction, authority, mission, capability, and desire to implement potential institutional controls, including land use restrictions. Completion of an Institutional Analysis will ensure that land use restrictions included in the response alternatives are enforceable.

USACE PMs should ensure that within the EE/CA’s description of the response alternatives, responsibilities for monitoring, reporting and enforcing any land use controls are specifically discussed.

**Principle 5-6:** In accordance with EP 1110-1-18, *Ordnance and Explosives Response*, and EP 1110-1-24, *Establishing and Maintaining Institutional Controls for OE Projects*, an Institutional Analysis must be completed as part of the EE/CA. Completion of an Institutional Analysis will ensure that viable potential land use controls are developed early in the EE/CA process and subsequently evaluated during the detailed analysis of response alternatives.

USACE PMs should ensure that within the EE/CA’s description of the response alternatives, responsibilities for monitoring, reporting and enforcing any land use controls are specifically discussed.

**Principle 5-8:** In accordance with EP 1110-1-18, *Ordnance and Explosives Response*, a Project Completion Memorandum must be prepared for FUDS properties after an OE response action has been completed. The Project Completion Memorandum must be sent to the project Information Repository and to all impacted property owners and is formal notification that residual OE may exist on the property. Also in accordance with EP 1110-1-18, a Statement of Clearance must be prepared for Base Realignment and Closure and for Installation Restoration Program sites after an OE response action has been completed.

## **6. Public Involvement.**

**Public involvement in all phases of the CTT range response process is crucial to effective implementation of a response.**

- In addition to being a requirement when taking response actions under CERCLA, public involvement in all phases of the range response process is crucial to effective implementation of a response (Principle 6-1.)
- Agencies responsible for conducting and overseeing range response activities should take steps to proactively identify and address issues and concerns of all stakeholders in the process. These efforts should have the overall goal of ensuring that decisions made regarding response actions on CTTs reflect a broad spectrum of stakeholder input (Principle 6-2.)
- Meaningful stakeholder involvement should be considered as a cost of doing business that has the potential of efficiently determining and achieving acceptable goals (Principle 6-3.)
- Public involvement programs related to management of response actions on CTTs should be developed and implemented in accordance with DOD and EPA removal and remedial response community involvement policy and guidance (Principle 6-4.)

Principles 6-1, 6-2, 6-3, and 6-4: Early and meaningful stakeholder and public involvement in the OE response process will be conducted in accordance with EP 1110-3-8, *Public Participation in the Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS)* and EM 200-1-2, *Technical Project Planning (TPP) Process*.

## **7. Enforcement**

**Regulator oversight and involvement in all phases of CTT range investigations are crucial to an effective response, increase credibility of the response, and promote acceptance by the public. Such oversight and involvement includes timely coordination between DoD components and EPA, state, or tribal regulators, and, where appropriate, the negotiation and execution of enforceable site-specific agreements.**

- DoD and EPA agree that, in some instances, negotiated agreements under CERCLA and other authorities play a critical role in both setting priorities for range investigations and response and for providing a means to balance respective interdependent roles and responsibilities. When negotiated and executed in good faith, enforceable agreements provide a good vehicle for setting priorities and establishing a productive framework to achieve common goals. Where range investigations and responses are occurring, DoD and the regulator(s) should come together and attempt to reach a consensus on whether an enforceable agreement is appropriate. Examples of situations where an enforceable agreement might be desirable include locations where there is a high level of public concern and/or where there is significant risk. DoD and EPA are optimistic that field level agreement can be reached at most installations on the desirability of an enforceable agreement (Principle 7-1.)
- To avoid, and where necessary to resolve, disputes concerning the investigations, assessments, or response at CTT ranges, the responsible DoD Component, EPA, state, and tribe each should give substantial deference to the expertise of the other party (Principle 7-2.)

- At NPL sites, disputes that cannot be mutually resolved at the field or project manager level should be elevated for disposition through the tiered process negotiated between DoD and EPA as part of the Agreement for the site, based upon the Model Federal Facility Agreement (Principle 7-3.)
- At non-NPL sites where there are negotiated agreements, disputes that cannot be mutually resolved at the field or project manager level also should be elevated for disposition through a tiered process set forth in the site-specific agreement (Principle 7-4.)
- To the extent feasible, conditions that might give rise to an explosives or munitions emergency (e.g., ordnance explosives) are to be set out in any workplan prepared in accordance with the requirements of any applicable agreement, and the appropriate responses to such conditions described, for example as has been done In the Matter of Former Nansmond Ordnance Depot Site, Suffolk, Virginia, Inter Agency Agreement to Perform a Time Critical Removal Action for Ordnance and Explosives Safety Hazards (Principle 7-5.)
- Within any dispute resolution process, the parties will give great weight and deference to DoD's technical expertise on explosive safety issues (Principle 7-6.)

**Principle 7-1:** CERCLA Section 120 *Federal Facilities*, requires that DoD enter into an interagency agreement with the Environmental Protection Agency (EPA) for all National Priority List (NPL) sites. A model Federal Facilities Agreement (FFA) has been developed by DoD and EPA for such purposes. Such agreements are negotiated through the Office of Counsel.

In the case of non-NPL sites, USACE PMs are advised to consider entering into site-specific interagency agreements when the USACE PM determines, in consultation with their Office of Counsel, that such an agreement will benefit the project. Such agreements should be negotiated by the Office of Counsel using the model FFA to the extent practical. If DoD and EPA do not agree on the need for a site-specific interagency agreement, USACE PMs should *not* delay response activities.

Project Teams should pursue a tiered dispute resolution process in the event the agencies cannot agree on the need for a site-specific interagency agreement. For example, the first tier level is the USACE District and its regulatory counterpart, the second tier level is the USACE Division and its regulatory counterpart, the third tier level is HQ USACE and its regulatory counterpart, and the fourth tier for FUDS is the Secretary of the Army (Assistant Chief of Staff for Installation Management (ACSIM) for non-FUDS) and U.S. EPA HQ.

Note: DERP, DoD's authorizing law, directs DOD to *consult* with EPA throughout the OE response process, not obtain EPA approval. For this reason, USACE PMs are directed to *not* enter into site-specific agreements at non-NPL sites with regulators that include any kind of penalty that may be levied against DoD or its representatives. This includes stipulated penalties associated with non-performance of work or with schedule compliance. In the event EPA persists in including such language in site-specific interagency agreements, USACE PMs are directed to elevate this issue through their chain of command to HQ USACE, Office of Counsel.

**Principle 7-2:** Project Team members are encouraged to highlight the distinction between "environmental samples" collected to determine the extent of chemical contamination and geophysical surveying to locate OE-related items. An acknowledgement of this distinction is appropriate when discussing characterization methods with regulators given the many differences between the safety/risk concerns, field procedures and technologies, analytical methods, and expertise required. While EPA has considerable experience in these issues as they apply to hazardous substances, the expertise in geophysical surveying for explosives safety issues associated with OE resides with USACE.

**Principle 7-5:** USACE PMs and PEs are required to develop OE workplans in accordance with EP 1110-1-18, *Ordnance and Explosives Response*, ensuring that sufficient and approved procedures are in place to respond to conditions that might give rise to an explosives emergency. Explosives safety issues *will not* be negotiated with regulators.

#### **8. Federal-to-Federal Transfers**

**DoD will involve current and prospective Federal land managers in addressing explosives safety hazards on CTT ranges, where appropriate.**

- DoD may transfer land with potential explosives safety hazards to another federal authority for management purposes prior to completion of a response action, on condition that DoD provides notice of the potential presence of an explosives safety hazard and appropriate institutional controls will be in place upon transfer to ensure that human health and safety is protected (Principle 8-1.)
- Generally, DoD should retain ownership or control of those areas at which DoD has not yet assessed or responded to potential explosives safety hazards (Principle 8-2.)

**Principle 8-1:** Early transfer (transfers prior to completion of response actions) of all property not on the NPL must be completed in compliance with DoD Policy Memorandum *Environmental Review Process to Obtain the Finding of Suitability Required for Use of Early Transfer Authority for Property Not on the National Priority List*, 24, April 1998.

#### **9. Funding for Characterization and Response**

**DoD should seek adequate funding to characterize and respond to explosives safety hazards (particularly UXO) and other constituents at CTT ranges when necessary to address human health and the environment.**

- Where currently identified CTT ranges are known to pose a threat to human health and the environment, DoD will apply appropriate resources to reduce risk (Principle 9-1.)
- DoD is developing and will maintain an inventory of CTT ranges (Principle 9-2.)
- DoD will maintain information on funding for UXO detection technology development, and current and planned response actions at CTT ranges (Principle 9-3.)

#### **10. Standards for Depths of Clearance**



**Per DoD 6055.9-STD, removal depths are determined by an evaluation of site-specific data and risk analysis based on the reasonably anticipated future land use.**

- In the absence of site-specific data, a table of assessment depths is used for interim planning purposes until the required site-specific information is developed (Principle 10-1.)
- Site-specific data is necessary to determine the actual depth of clearance (Principle 10-2.)

#### **11. Other Constituent (OC) Hazards**

**CTT ranges will be investigated as appropriate to determine the nature and extent of Other Constituents contamination.**

- Cleanup of other constituents at CTT ranges should meet applicable standards under appropriate environmental laws and explosives safety requirements (Principle 11-1.)
- Responses to other constituents will be integrated with responses to military munitions, rather than requiring different responses under various other regulatory authorities (Principle 11-2.)

Principle 11-2: USACE PMs will continue to schedule HTRW and OE response actions in a manner that allows higher priority projects to be addressed first. The priority assigned to a site's OE response action and to the same site's HTRW response action are frequently different based on the potential impacts posed to human health and the environment. Decisions regarding the scheduling and funding of response actions are, in turn, based on the priority assignment.

Separate workplans are developed for OE and hazardous substances and other constituents due to the fact that very different concerns are posed by OE vs. hazardous substances. For this reason a different investigation and clean-up approach and a different set of expertise is required to address OE vs. hazardous substances.

Note: All HTRW and OE response actions are conducted under the authority of DERP and CERCLA.